

**LONG ISLAND**

# Chemical from Brookhaven lab may have spread to residential wells



High levels of the chemical PFOS, which was used in firefighting foam, have been found at Brookhaven National Laboratory. This photo is from September 1970 at Brookhaven. Credit: U.S. Department of Energy

**By David M. Schwartz**

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Contamination from a firefighting foam has been found at Brookhaven National Laboratory, raising concerns from an advisory group that a soon-to-be-regulated chemical has spread off-site to private residential wells.

The lab's community advisory council urged BNL to test 97 properties in East Yaphank south of the lab for per- and polyfluoroalkyl substances (PFAS), a group of artificially made chemicals that includes perfluorooctane sulfonic acid (PFOS). The chemical, which was in firefighting foams used at the lab from the 1960s until 2008, is expected to be regulated next year by New York State, officials said.

In a Nov. 8 letter, the council wrote that it "is concerned about members of the public utilizing private wells that live south of the Laboratory and may be adversely impacted by PFAS contamination," according to the letter from the 26-member advisory council, made up of civic board representatives, scientists and environmentalists, to lab director Doon Gibbs. "The members of the CAC [community advisory council] are hopeful that the practice of prioritizing public health, environmental and groundwater protection will continue and that BNL will test all private wells contained in the 97 additional properties."

Brookhaven National Lab officials said last week they had not decided whether to test the wells outside the lab, south of the Long Island Expressway, and was working with local, state and federal regulators. BNL is a research institution funded primarily by the U.S. Department of Energy, with almost 3,000 employees and 4,000 visiting researchers studying physics, chemistry, biology, medicine, and applied science.



Brookhaven National Lab officials said they have not decided whether to test 97 water wells outside the lab, south of the Long Island Expressway, for possible contamination. Credit: Randee Daddona

Brookhaven has continued to drill wells on the 5,265-acre lab grounds in Upton to see how far the contamination has spread. The chemical has been detected at the highest levels around its current and former fire stations, and in three of five drinking water supply wells.

"We recognize how important this issue is. We're trying to move forward as quickly as we can, working with the regulators," Jason Remien, manager of the lab's environmental protection division, said Wednesday.

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Officials from the state DEC and Department of Health said in a joint statement they were evaluating the need to test the wells "as part of their comprehensive investigation of contamination."

The Suffolk County Department of Health Services had requested private well testing for about 97 properties, in an area that stretches south from the lab to Sunrise Highway, according to a PowerPoint presentation given to the advisory council in October.

"It is the position of Suffolk County Department of Health Services that due to the detection of PFAS in groundwater on BNL property above the EPA health advisory level, the U.S. Department of Energy should pay for PFAS testing in private wells down-gradient of BNL," according to a statement from health department spokeswoman Grace Kelly-McGovern.

Private wells are not regularly tested or treated, and are generally shallower than those drilled by public water providers, meaning health officials fear they're more susceptible to pollution. The number of private wells on Long Island is unknown, though water officials estimate up to 40,000 homes are on private wells.

The group of chemicals at issue increasingly have become a concern among regulators and environmentalists. Health effects include liver damage, decreased fertility, developmental delays in fetuses and children, and is considered a possible carcinogen, according to the U.S. Environmental Protection Agency.

The detection of PFOS in groundwater prompted the state to add Gabreski Air National Guard Base in Westhampton Beach and a Suffolk County fire-training center in Yaphank to the state Superfund list because of contaminated water supplies. The chemicals have shown up in private wells in nearby Wainscott, as well as in public wells in Hampton Bays.

A state panel this month recommended a drinking water standard of 10 parts per trillion for PFOS and a related chemical PFOA, used in manufacturing, which would be the most protective drinking water standards in the nation. The state health commissioner is expected to set a standard next year.

Historical photos included in the lab's presentation to the advisory group show firefighting foam spilling onto the ground during training exercises in 1966 and a demonstration of a fire suppression system in 1970.

Testing wells installed near the lab's current firehouse found levels of PFOA and PFOS up to 12,400 parts per trillion, and at 5,370 parts per trillion at the lab's former firehouse, according to a statement from lab spokesman Pete Genzer. Those two sites were believed to be the "primary locations" where firefighting foam was used during training.

The Suffolk Department of Health Services tested drinking water supply wells in 2017 as part of a national program to collect data on emerging contaminants of concern to the public. The detection at BNL previously had not been reported.

The contamination has been found at three of the five drinking water supply wells at BNL; two at levels of up to 27 parts per trillion, and one at up to 70.4 parts per trillion, though Remien said he believes there was a quality assurance problem with the highest sample, from June 2018. Other samples were below 70 parts per trillion, which is the current EPA health advisory level for PFOS.

One supply well is no longer used, and the lab is re-establishing carbon filtration on the other two wells, Genzer said in a statement. Tests of treated drinking water at the lab are less than 3 parts per trillion, he said.

Adrienne Esposito, executive director of Citizens Campaign for the Environment and a member of the CAC, said BNL shouldn't delay testing the private wells.

"To be a good neighbor, they should just test the wells," she said. "It is an ethical obligation of BNL to test their neighbors' wells for contamination they may have caused."

Legis. Al Krupski (D-Copiague), whose district includes the lab, said he believes BNL is evaluating other potential sources of contamination.

"I think they have to do their due diligence, and I have confidence they will. They have addressed environmental concerns in the past," he said.

Raymond Keenan, representative for Affiliated Brookhaven Civic Organizations, said, "I don't have a feeling they're sitting on this, but it's a bureaucracy. They have to go through their motions."

Mike Giacomaro, president of the East Yaphank Civic Association, said most of the homes in the area have been offered hookups to public water supplied by the Suffolk County Water Authority because of pollution passed from BNL, including tritium in the groundwater.



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